

# [Defect Diagnosis for Semiconductor Integrated Circuits]

## Abstract

A method for defect diagnosis of semiconductor chip. The method comprises the steps of (a) identifying  $M$  design structures and  $N$  physical characteristics of the circuit design, wherein  $M$  and  $N$  are positive integers, wherein each design structure of the  $M$  design structures is testable as to pass or fail, and wherein each physical characteristic of the  $N$  physical characteristics is present in at least one design structure of the  $M$  design structures; (b) for each design structure of the  $M$  design structures of the circuit design, determining a fail rate and determining whether the fail rate is high or low; and (c) if every design structure of the  $M$  design structures in which a physical characteristic of the  $N$  physical characteristics is present has a high fail rate, then flagging the physical characteristic as being likely to contain at least a defect.